Section 2

Affected Environment

2.1 Existing Transportation Facilities

2.1.1 Highways

Interstates 280 and 74 are the major routes serving the study area (see Figure 1-2). Interstate 280 is located south of the Rock River and carries traffic from Interstate 80 in Iowa to Interstate 80 east of the Quad Cities. Interstate 280 provides the west and south legs of the loop around the Quad Cities. Interstate 80 is the major east-west route across the United States, connecting New York City with San Francisco.

Interstate 74 just east of the Project Area carries traffic from Interstate 280, across the Rock and Mississippi Rivers to Interstate 80 north of the Quad Cities. I-74 shares a common route with 280 to the Interstate 80 interchange east of the Quad Cities. Locally, I-74 provides a high quality highway through the middle of the Quad City area. Interstate 74 extends from the Quad Cities southeast to its terminus in Cincinnati, Ohio.

Other highways which have an influence on the Illinois Quad Cities include US 67, IL 5, US 6, IL 92, US 150, and IL 84. These routes provide for major traffic movements within Rock Island County and connect the Illinois Quad Cities to distant communities. Figure 1-1 shows the location of these state and federally designated routes. In brief, these routes are:

- US Route 67 - Connects the Illinois Quad Cities to St. Louis and then extends to the southwestern United States. The highway also travels north from the Quad Cities to its termination at Clinton, Iowa.
- IL Route 5 - Starts at the intersection of 11th Street (US Route 67) and Blackhawk Road in Rock Island. The route extends east along Blackhawk Road through the study area, connects with I-74 as the John Deere Expressway, and continues east to an interchange with I-80 east of the Quad Cities. IL Route 5 (now I-88) extends to the

Chicago area where it terminates at the Tri-State Tollway (I-294). The route is a toll facility from Rock Falls to the Chicago area.

- US Route 6 - Runs east-west south of the Rock River and crosses the Rock and Mississippi Rivers on I-74, extending west to California. US Route 6 parallels I-80 to Chicago and then continues east to Massachusetts.
- IL Route 92 - Enters the Illinois Quad Cities from the east carrying traffic along the Mississippi River to an interchange with I-280 south of the Rock River, exiting Rock Island County west of Illinois City. The route extends west into Iowa and east to mid-state Illinois.
- US Route 150 - Extends south from the Quad City Airport to central Illinois and on to Kentucky.
- IL Route 84 - Originates at US Route 6 east of the Quad Cities and extends north through the area to an interchange with I-80 at Rapids City. The route continues north along the Mississippi to the Wisconsin border.

2.1.2 Rail Service

No railroads are located within the project area. The Illinois Quad Cities are provided freight service by several railroad companies. These companies are the Davenport, Rock Island and Northwestern Railway Company; the Iowa Interstate Railroad (formerly the Chicago, Rock Island, and Pacific); and the Burlington Northern Santa Fe Railroad.

2.1.3 Airport Services

The Quad City International Airport is located south of the Rock River and is included in the southern part of the project area. Facilities for commercial air travel are located on the north side of the airport and general aviation services on the south. The northwest-southeast runway ends approximately 1525 meters (5,000 ft) from the proposed Milan Beltway Extension. The new roadway will not impact the NW-SE runway protection zone or FAR Part 77. A recent extension to the E-W runway brings pavement within 670 meters (2,200 ft) of the Milan Beltway. No further E-W runway expansions are anticipated and highway impacts on the runway are not anticipated.

Figure 2-1 shows the existing airport facilities and the new extension of the E-W runway. The recent runway extension stops approximately 824 meters (2,700 ft) from the existing Milan Beltway. The proposed Airport Road interchange in the southeast intersection quadrant will encroach somewhat into the "Runway Protection Zone" for the recent runway extension (see Figure 2-1). The interchange will miss the "Approach Light System" for the extended runway. The transfer of approximately 5.8 hectares (14.4 acres) of airport land needs to be approved by FAA before released to the State of Illinois for project construction (see Figure 2-1).

The proposed Milan Beltway Extension was reviewed with airport officials in meetings held April 10, 1987, and again on October 25, 1991. They were given a copy of the proposed roadway facility on both occasions. ~~Notes from the October 25, 1991 meeting are found in~~

~~Appendix D, Page 34.~~ Coordination with the Federal Aviation Administration (FAA) is documented in Appendix E.

Airport officials have also requested access to their wind shear detector and that interchange lighting be less than 15 meters (50 ft) high. FAA has recently set a height limit of 7.6 meters (26 ft.) for certain light standards. These two features have been incorporated into the design. Airport officials have expressed some concern for interchange encroachment onto their property and requested an explanation of why the Airport Road interchange was placed in the southeast quadrant. ~~An explanation was provided in a letter to them dated October 29, 1991 (See Appendix D, Page 36).~~

Airport officials support the proposed project and expect it to greatly enhance access to their facility. Access to the airport from the north and west will improve dramatically, particularly for traffic originating north of Rock River and west of the proposed Beltway

Airport Master Plan, Figure 2-1

Airport Master Plan
Figure 2-1

2.1.4 Mass Transit Facilities

The Rock Island County Metropolitan Mass Transit District (RICMMTD) has plans to use the proposed Beltway for a bus route.

2.1.5 Other Facilities

No barge facilities or bus terminals are located within the project area. A truck terminal is found on the north side of Airport Road, west of the proposed Milan Beltway Extension. United Parcel Services is also located north of Airport Road in the project area. A truck terminal sits on the east side of the Milan Beltway opposite the John Deere entrance road. Air freight services are located on the east side of the Quad City Airport, approximately 4 kilometers (2.5 miles) east of the proposed project.

2.2 Municipalities, Villages, and Counties

2.2.1 Social Setting

The area expected to be influenced by the proposed project is characterized by commercial, institutional, and vacant areas. South of the Rock river, both in Milan and in the unincorporated area of Rock Island County, an older residential area is found along Sunshine Lane and Frank Street, 183 meters (600 ft) and 397 meters (1300 ft) west of the project respectively (see Figure 2-4). A small pocket of mixed residential and commercial use fronts on Airport Road at the extreme west end of the proposed project in Milan.

North of the Rock River, the area north of Blackhawk Road from 44th Street in Rock Island to 7th Street in Moline is a mix of residential and medical related uses with residential use predominating. South of Blackhawk Road, the area in both communities is devoted to commercial and medical-related uses with some vacant land. Figure 2-4 shows current uses in the project area.

2.2.2 Demographics and Environmental Justice

Presidential Executive Order 12898 issued on February 11, 1994 requires that each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

There are three fundamental environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The 2000 Census provides information regarding the social and ethnic population in Rock Island County and the Beltway project area. Table 2-1 summarizes 2000 census population information and income data for the county, and the three affected municipalities.

Table 2-2 shows social composition of the project corridor. Figure 2-2 shows census tract boundaries. While boundaries do not correspond directly to the anticipated influence area of the project, the table provides insight into social composition.

Table 2-1
Race and Hispanic Origin
Rock Island County, Milan, Moline, and Rock Island
2000

	County	Milan	Moline	Rock Island
Total Population	149,374	5,348	43,768	39,684
Percent One Race	98.1	98.6	98.2	97.8
Percent White	85.5	92.5	88.4	77.1
Percent Black	7.5	4.3	3.1	17.2
Percent American Indian and Alaska Native	0.3	0.2	0.2	0.3
Percent Asian or Islander	1.0	0.4	1.4	0.8
Percent Other	3.8	1.1	5.1	2.4
Percent Two or More Races	1.9	1.4	1.8	2.2
Percent Hispanic Origin (of any race)	8.6	2.9	11.9	5.9
Median Household Income ($)	36,608	34,556	39,363	34,729
Per Capita Income ($)	20,164	17,608	21,557	19,202

Source: 2000 Census of Population

Table 2-2
Racial Composition and Income Data
Milan Beltway Project Corridor
2000

Census Tract/ Block Group	Percent								Per Capita Income ($)	Median Household Income ($)
	Total Pop	White Alone	Black Alone	Native American Alone	Asian Alone	Some Other Race Added	Two or More Races	Hispanic or Latino		
230 (Rock Island)										
100	2787	94.7	1.9	0.1	1.8	0.5	1.0	2.7	31,120	50,276
200	1270	96.1	2.4	0.2	0.2	0.2	0.9	1.3	24,989	63,125
221 (Moline)										
200	1483	90.4	1.8	0.1	2.4	2.6	2.7	7.2	42,118	45,551
219 (Moline)										
100	1769	91.2	2.6	0.1	0.6	3.2	2.3	5.6	17,983	31,815
243 (Milan/Airport)										
900	901	96.1	0.3	0.2	0.2	2.1	1.1	3.2	17,768	37,188

*Of Any Race

Source: 2000 Census of Population

Census Tract Boundaries, Figure 2-2

Census Tract Boundaries
Figure 2-2

Block statistics from the 2000 Census were used to develop an ethnicity profile of minorities in the project's influence area. People living within 610 meters (2000 ft) of the proposed centerline and north and south project termini. The following summarizes the census information.

Area	Location	Total	White	Non-White
	North of Rock River			
1.	Between Rock River and Blackhawk Road/John Deere Expressway	17	14	3
2.	610 Meters (2000 ft) north of Blackhawk Road/John Deere Expressway (on bluff)	620	546	74
	South of Rock River			
3.	Between Airport Road and Rock River	14	14	0
4.	610 meters (2000 ft) South of Airport Road	75	65	10
	Total	726	639	87

Source: 2000 Census of Population

The largest concentration of non-white population is located in the "block" between 44th Street and 38th Street, Rock Island on the bluff north of the proposed north project terminus. The next largest concentrations are also on the bluff north of the project terminus between 44th Street in Rock Island and 7th Street, Moline.

Use of 2000 census income and poverty threshold data indicates that the proposed project does not impact low income families. In 1999 (1999 incomes are used for 2000 census data), the median household income in the project area ranged between $31,815 and $63,125 (see Table 2-2). Weighted average poverty thresholds in 1999 for a four-person family unit was $17,029, significantly less than corridor household incomes.

Poverty guidelines for 2002 developed by the Department of Health and Human Services are $18,100 for a four-person family. This figure is below the lowest 1999 Census corridor median low household income of $31,815.

2.2.3 Economic Profile

A commercial/industrial area, located at the intersection of the present Milan Beltway and Airport Road, consists of a gasoline station, used and "junked" truck storage, and a small warehouse operation.

North of the Rock River, a medical office complex and warehousing has developed on 3rd Street south of Blackhawk Road. Other businesses include a union hall, a vacant family fun center, a gas station/car wash complex, several commercial uses, office buildings, and the Rock Valley Plaza shopping center.

Historically the Quad City area has relied heavily on manufacturing as its primary source of employment. The farm implement industry started in the Quad Cities and, although reduced in size in recent years, is important in the manufacturing sector. Table 2-3 shows recent employment patterns in the metropolitan area.

Table 2-3
Employment by Industry
Quad City Area
1997 and 1999

	1997	2000
Civilian Labor Force	184,050	189,450
Employment	177,475	181,490
Unemployment	6,575	7,960
% Unemployment	3.6%	4.0%
Non-Agricultural Wage & Salary	176,100	185,900
Goods Producing	38,700	40,460
Mining & Construction	8,700	9,500
Manufacturing	30,000	30,960
Service Producing	137,400	144,685
Transportation, Communication & Utilities	9,000	10,500
Wholesale & Retail Trade	47,600	48,660
Finance, Insurance, Real Estate	8,900	8,150
Non-Professional/ Professional Services	45,900	52,000
Government	26,500	26,375

Source: Illinois Department of Employment Security

2.2.4 Public Facilities and Services

Public services are located on Figure 2-3.

Public education in Rock Island County is provided by 52 elementary schools, 12 junior high schools, and five senior high schools. Private education is provided by ten parochial elementary and two senior high schools. There are no schools in the study area. Elementary-age children residing within the study area attend public school at Alexander Hamilton, Eugene Field, Horace Mann, or W. L. Eddy schools. Higher education is also provided in Rock Island County. Blackhawk College on the Moline-East Moline border provides area residents

Public Services, Figure 2-3

Public Services
Figure 2-3

the opportunity of earning a two-year degree and continuing on to a four year school or obtaining a two-year degree in a specialized field. Augustana College is a private four-year liberal arts school which provides graduate curriculums in certain specific fields. The Quad City Graduate Center offers graduate degrees in a variety of areas. Western Illinois University maintains a campus in southeast Moline.

Medical facilities provided in Rock Island County include three general hospitals, a regional trauma center, a mental health clinic, a general burn center, and a tuberculosis sanitarium. Rock Island and Scott Counties have established a regional health planning agency to coordinate and provide more effective health service in the metropolitan area. None of the above facilities are located in the study area. Trinity Medical Center has built a new facility at the southwest corner of John Deere Expressway and 7th Street. A number of medical and dental offices are located on 3rd Street north of 52nd Avenue.

Fire protection services north of the Rock River are provided by the cities of Rock Island and Moline. The Blackhawk Fire Protection District serves the area south of the Rock River from its station in Milan.

2.2.5 Regional Planning

The Bi-State Regional Planning Commission was formed in 1966 to unify the Rock Island County (Illinois) Regional Planning Commission and the Scott County (Iowa) Metropolitan Planning Commission into one commission that would represent the interests of the entire Bi-State area. This decision was in response to federal and local encouragement to coordinate planning across state lines. The resolution establishing the Bi-State Metropolitan Planning Commission abolished both county planning commissions and provided a 22-member commission, 11 from each county. The Bi-State Metropolitan Planning Commission now known as the Bi-State Regional Commission is the legally constituted agency to undertake and approve the "3-C" (continuing, comprehensive, and cooperative) transportation planning process required by the Federal-Aid Highway Act of 1962 and serves as the regional planning agency for the study area. In 1974 Henry County (Illinois) became a Bi-State member, followed by Muscatine County (Iowa) and Mercer County (Illinois) in 1976.

The most recent Urban Area Transportation Plan, “2025 Quad City Area Long Range Transportation Plan,” was adopted in March 2001. This plan schedules completion of the Milan Beltway Extension Project including the widening of the Beltway south of Airport Road in the 2001-2010 time period. The 2020 Urbanized Area Transportation Plan, adopted in June 1995 and amended in March 1996, showed the Rock River Bridge being constructed and the Milan Beltway south of Airport Road widened to four lanes between 1995 and 2005. The July 1986 Quad City area transportation plan proposed that the Milan Beltway Extension project be completed in the 1991-2005 time period. The 1995 transportation plan (December 1975) shows the proposed project. The 1985 street and highway plan (February 1970) for the Quad City area shows a Rock River crossing west of the current proposed location with a connection in the vicinity of 38th Street, Rock Island rather than 7th Street, Moline. In essence, the Milan Beltway Extension has been included in Quad City transportation plans for more than 30 years

2.3 Land Use

2.3.1 Existing Land Use

Corridor land use south of the Rock River is predominately agricultural and vacant (see Figure 2-4). A commercial/industrial area is located at the intersection of the present Milan Beltway

Existing Land Use, Figure 2-4

Existing Land Use
Figure 2-4

and Airport Road. Most of these commercial/industrial uses are located in what will be the northwest quadrant of the intersection and consist of a gasoline station, used and "junked" truck storage, and a small warehouse operation.

Land north of the Rock River can be characterized as vacant or agricultural undergoing development. A medical office complex has developed on 3rd Street south of Blackhawk Road. Trinity Medical Center is located at the southwest corner of 7th Street and the John Deere Expressway. Several commercial uses have been located on the Rock Island border for a number of years. These uses include a bottling company and bowling alley (now a union hall and vacant family fun center). More recent development to the west of these long time uses are an athletic club, a gas station/car wash complex, office buildings, and the Rock Valley Plaza shopping center. Single family residential uses are located on the bluff overlooking Blackhawk Road. Older single family structures are found on the west side of 7th Street near the 52nd Avenue intersection. A transmission line crosses the corridor just north of the Rock River.

2.4 Public Recreation Areas

2.4.1 Park Areas

The closest parkland to the proposed project is Ben Williamson Park. The City of Rock Island owns 16.2 hectares (40 acres) of land just west of the Beltway project (see Figure 2-5). A portion of the Rock River frontage is used by the "Backwater Gamblers" water ski club as a viewing area, parking, and concession for their water ski shows held during the summer months. The remainder of the area is unimproved and provides open space. The city owned land is approximately 30 meters (100 ft) west of the western Beltway right-of-way line.

The city proposes to fully develop the 16.2 hectares (40 acres) at some future date. The park master plan indicates a relatively passive park in conjunction with the ski club's facilities. Proposed facilities include a new roadway, parking, boat ramp, nature trails, wildlife observation platform, environmental education areas, play field and picnic area. The project is presently in the pre-design and permitting phase and is waiting resolution of wetland-related issues.

The boundaries of Ben Williamson Park were established by a consolidation of several existing parcels. One of these parcels was subdivided to include a narrow 9.7 meter (32 ft) strip of property that served as an access strip to IL5 (Blackhawk Road) when the parcel was in private ownership. When this parcel was included in the land that made up Ben Williamson Park, the parcel was not utilized for driveway construction. Instead, access to the park is via a southerly extension of 44th Street. Current plans are to cross this narrow strip of city-owned property with a road from 44th Street accessing two properties located just west of the proposed beltway and south of Blackhawk Road.

In correspondence dated July 10, 1998 (see Appendix D), the director of the parks and recreation has certified that this strip of land is not part of any recreational activity of the park, but instead serves only as an unused parcel for park access. This proposed project will not alter that function. The project will acquire approximately 0.50 acre of that parcel. Acquisition of this parcel is discussed further in Section 4 where Figure 4-3 shows the

location (See 4.4 Future Land Use). Access will still be allowed (via the new driveway) to 44th Street and thence IL 5 by utilizing the remainder of this strip for potential construction of an access road by the park

Public Recreation Areas, Figure 2-5

Public Recreation Areas
Figure 2-5

and recreation department. No other property from this park will be converted to transportation use or acquired for this project. Based on the above, the Federal Highway Administration concurred on August 26, 1998 that this impact to the park-owned strip of property was exempt from Section 4(f) analysis. A 32-hectare (80-acre) borrow pit and associated land area is located between I-280 and the Rock River. The property is owned by the village of Milan. The area is occasionally used for fishing and walking. Flood protection levees are also located in the old borrow pit area. The west portion of the land is leased to the Rock River Beagle Club. The leased land is more than 550 meters (1800 ft) west of the centerline of the proposed project.

2.4.2 State Facilities

The Hennepin Canal Parkway State Park is approximately 800 meters (0.5 mile) west of the project. The closest natural area is the Rock River Illinois Natural Area Inventory Site, which is also approximately 800 meters (0.5 mile) downstream from the proposed river crossing and Lock and Dam #30 (see Figure 2-5). The nature preserve located in Black Hawk State Historic Site is about 2.4 kilometers (1.5 miles) west of the proposed project. None of these facilities will be impacted by the proposed project.

2.4.3 Rock River

At this location, the Rock River is used for pleasure boating, water skiing, and fishing. A local water skiing club uses the river as a practice area for their ski shows.

2.4.4 Bicycle Trails and Pedestrian Facilities

A bicycle plan, showing both existing and proposed bicycle trails, is included in Bi-State Regional Commission's latest (2001) metropolitan area transportation plan. The plan proposes to use the Milan Beltway Extension Bridge over the Rock River to allow a 10-mile separated corridor trail along the Beltway. The trail would tie into an extension of the Kiwanis Trail in Moline. Figure 2-5.1 shows the existing and proposed trail system in the project area.

A recreational bike and walking trail currently exists along the Hennepin Canal and circles the old borrow area between I-280 and the Rock River (see Figure 2-5). The borrow area is owned by the Village of Milan. The bike trail follows the top of the levee near I-280 but is near water level along the bank of the Rock River. The proposed Beltway Extension will span the bike trail at two locations and no property will be acquired.

2.5 Agriculture Resources

Figure 2-4 locates agricultural land in the study area. Figure 2-9 shows cover types within the study corridor. Table 2-6 indicates that approximately 96 hectares (237 acres) of upland and wetland farmland are located in the study corridor. Agriculture use is approximately 40 percent of the total study area. Cash grain (corn and soybeans) is grown and livestock is not present.

Agricultural soils north of the Rock River within the study area generally fall within Capability Class I and II, indicating prime and important farmland. South of the Rock River, prime and important farmland predominates.

Trails Network, Figure 2-5.1

Trails Network
Figure 2-5.1

Under Cooperative Working Agreements between the Illinois Department of Transportation and the U.S. Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS) and the Illinois Department of Agriculture, this project is exempt from coordination because the project lies within the one and one-half mile municipal planning area of the cities of Rock Island and Moline; better known as the Bi-State Regional Commission's Planning Area.

2.6 Cultural Resources

The project corridor is within an area of rich pre-historic culture, as it was a major encampment/settlement site for Native American tribes. Prehistoric cultural sites are noted throughout the entire Rock River Valley Corridor. Of particular concern was the Historic Crawford Farm, a major prehistoric site extensively impacted by a large quantity of borrow removal prior to the provisions of the National Environment Policy Act. The preliminary corridor reconnaissance discovered nine prehistoric sites of which four required Phase II testing (see Section 4.6).

There are no registered prehistoric or historic sites in the project corridor. The nearest registered site is the Hennepin Canal located one-half mile from the project corridor.

2.7 Geological Setting

2.7.1 Bedrock and Structural Geology

The project area is located on the northern edge of the structural feature known as the Illinois Basin. Covering over two-thirds of the state, the Illinois Basin is one of Illinois' most prominent geologic structures both in terms of land area and its influence on present day geology. The basin is a spoon shaped bedrock structure that gradually subsided over a period of 250 million years. As the basin subsided, marine sediment accumulated in the developing depression, creating stratified layers of bedrock.

Since the project is on the northern edge of the basin, the bedrock is composed of only about 1220 meters (4,000 ft) of bedrock. The strata are grouped by age and are composed of Cambrian sandstones (oldest), followed by Ordovician and Silurian dolomites, Devonian limestones, and in some places, Pennsylvanian System strata. Missing are the Mississippian limestones that form a thick sequence in the deeper parts of the basin, but were eroded away from this area. The Pennsylvanian System's bedrock is the youngest and uppermost bedrock found within the project area. The stratum comprising this System are fine-grained sedimentary materials consisting of alternating beds of sandstone, limestone, shale, dolomite, and coal. The Pennsylvanian bedrock is primarily found in the upland areas whereas the Pennsylvanian bedrock has been eroded away in the valley bottoms. The Devonian limestone with some dolomite, shale, and sandstone is the dominant bedrock in these valley bottom areas. Also, in some area, sinkholes and other solution cavities have developed in the Devonian limestone and have been filled with Pennsylvanian rocks (mostly shales).

2.7.2 Surface Geology and Topography

Many of the project area's physical features and surface deposits are the direct result of Illinoisan and Wisconsinan glaciation of the Pleistocene Epoch. The Kellerville Till member of the Glasford Formation of Illinoisan age is generally present throughout the county and less than 15 meters (50 ft) thick, except where it has been removed by erosion along the major valleys. Overlying the Glasford Formation in upland areas is wind-deposited material of Wisconsinan age, mostly silts, loess or sand, and have been mapped as Peoria Loess. In places the Peoria Loess grades into the Parkland Sand (dunes) and Dolton Member of the Equality Formation (sandbars). The Peoria Loess varies in thickness from 5 to 15 meters (15 to 50 ft).

In the valleys a variety of water-laid deposits occur such as the Henry Formation (sand and gravel) and the Equality Formation (sands and silts). These deposits either form terraces or underlie the floodplains, which in turn are covered by the present day Cahokia Alluvium and Peyton Colluvium (deposits from creeps, slumps and landslides). Some of these earlier deposits may have been removed or reworked by the Rock River, and consequently, bedrock in these areas are covered by deposits of silt, sand, and gravel of the Cahokia Alluvium. The Rock River itself flows almost directly on top of limestone bedrock.

Well logs indicate that the thickness of the unlithified materials in the area ranges from 0 to approximately 53 meters (0 to approximately 175 ft). Unlithified materials consist primarily of Cahokia Alluvium and Henry Formation deposits.

Soil types in the project area belong to either the Sawmill-Coffeen-Mixed Land Soil Association or the Raddle-Joslin Soil Association, reflecting the drainage characteristics and parent material of this lowland area. The Sawmill-Coffeen-Mixed Land are found on nearly level bottom lands (e.g., Rock River floodplain) and formed mainly in silty alluvium. The Raddle-Joslin soils formed on nearly level to moderately sloping terraces, in sandy to clayey alluvium. Many of the soils found in these two soil associations are hydric.

Topography along most of the project is nearly level, sloping slightly towards the Rock River. Most of the project is within the broad, level, Rock River valley bottom, and begins to slope up the sides of the valley at both the north and south ends of the project. Elevations range from around 170 meters (560 ft) above mean sea level at the Rock River to approximately 177 meters (580 ft) above mean sea level at both the north and south ends of the project.

2.7.3 Mineral Resources

Several limestone quarries and sand and gravel pits in Rock Island County provide crushed rock for roads; finely ground material for limestone application on fields; and sand and gravel for building materials. There are no active limestone quarries or sand and gravel pits within the project area, however, a gravel pit along the south side of the river within the project area (known as the borrow pond area) was excavated beginning in the 1950s. After it was mined, some municipal wastes were placed in the pit in the 1960s (see Section 2.11).

Though coals are present, they are not of economic interest in the project area and have been mined in the past only in small, local mines along bluffs.

2.7.4 Landslides

Unstable earth materials occur in this area where alluvium or other relatively unconsolidated materials overlie relatively impermeable glacial till or Pennsylvanian-aged shale. Due to the relative impermeability of the till and shale, downward-percolating water tends to collect at the base of the more permeable silt or sand. When the ground is saturated, instability can result in earth movements.

According to the Illinois Landslide Inventory Map, two slumps have occurred in the area. A slump occurred along a cut bank of Case Creek east of the project. Apparently, Case Creek undercut a bank comprised of alluvium over shale and the bank slumped into the creek. A second slump, located on a bluff of the Rock River near I-280, involved an area of glacial till and sandstone over shale. Removal of the toe of the slump and wetting of the shale has caused the slump to move in the past. The project will pass over materials similar to those involved in these slumps.

2.8 Water Resources/Water Quality

The water resources within the project area are classified as riverine (streams), lacustrine (lakes) and palustrine (wetlands) systems (Cowardin et al 1979). These systems are identified on the National Wetland Inventory map (NWI) (Milan Quadrangle) and are depicted on Figure 2-6. Riverine and lacustrine systems are discussed within this section. The palustrine system is discussed under subsection 2.8.4 Wetlands.

2.8.1 Surface Water Resources

Surface water resources within the project area include the Rock River proper, a flooded borrow area between the Rock River and I-280, and an unnamed intermittent drainageway north of the river.

2.8.1.1 Rock River. The Rock River originates in the Horicon Marsh in Dodge County, Wisconsin. The river flows in a generally southwestern direction through Northwestern Illinois to its confluence with the Mississippi River at Rock Island. The confluence is approximately 9.6 kilometers (6 miles) downstream of the project area. The total drainage area of the Rock River is 28,270 square kilometers (10,915 square miles) of which 9,200 square kilometers (3,550 square miles) are in Illinois (Illinois EPA, 1996). There are seventeen dams on the Rock River above the project area. Ten dams are located in Wisconsin and seven in Illinois. The majority of the watershed is in agricultural lands with major urban areas in Rockford and Moline-Rock Island, Illinois.

The Rock River through the project area exhibits the characteristics of an impoundment or "pool" area created by the Steel Dam located between Vandruff's Island and the south shore approximately 800 meters (0.5 mile) downstream of the proposed river crossing. A low-head hydroelectric dam between the north bank and the downstream end of Vandruff's Island also aids in formation of this impounded reach of river. The relatively

slack water behind these dams causes suspended material to settle to the substrate. Thus, this section of the river is classified as a lacustrine, limnetic, unconsolidated bottom, permanently flooded, impounded (L1UBHh) wetland according to the national wetlands inventory map (see Figure 2-6).

The Rock River is considered navigable and public. The stretch of the river from the Steel Dam to the mouth (Figure 2-7) is a designated Illinois Natural Area. The significant features of this natural area include the Higgins' Eye Pearly Mussel (federal and state endangered species) and River Otter (state endangered).

The Biological Stream Characterization (BSC) is a stream classification system developed by the IEPA, IDNR and Illinois Natural History Survey. The classification is based on the attributes of lotic fish communities and macroinvertebrate data (IEPA 1996). The classification consists of five categories that range from Class A (Unique Aquatic Resource) to Class E (Restricted Aquatic Resource). The Rock River in the project area is classified as a Class C (Moderate Aquatic Resource) stream (Hite and Bertrand 1989, BSC map updated 1995).

National Wetlands Inventory Maps, Figure 2-6

National Wetlands Inventory Maps
Figure 2-6

Illinois Natural Area, Figure 2-7

Illinois Natural Area
Figure 2-7

Table 2-4 shows water quality conditions for selected parameters for the Rock River at Joslin. Joslin is approximately 32 kilometers (20 miles) upstream and is the closest sampling station to the project area. Readings for the years 1993 to 1998 were averaged to achieve an annual value for twelve parameters. Water quality standards appear in IEPA (1996), Volume 1, Table 4. None of the parameters exceeded water quality standards during the similar period.

The IEPA utilizes Use Support assessments for rivers and streams. Uses assessed include aquatic life, fish consumption and swimming. An Overall Use assessment summarizes the preceding three uses. The use assessments are based on current water quality standards. The degree of Use Support attainment is described as either Full, Full/Threatened, Partial/Minor, Partial/Moderate, or Nonsupport. The Rock River in the project area has been assessed as having an Overall Use attainment of Partial Support/Minor Impairment. The causes of the impairment are from nutrients, suspended solids, flow alteration and other habitat modifications. The sources of the impairment are from non-irrigated crop production, pasture land and flow regulation/modification (IEPA, 1996).

Table 2-4
Water Quality
Rock River at Joslin
1993-1998

Parameter	Standard	1993[b]	1994[c]	1995[c]	1996[d]	1997[c]	1998[e]
Barium	5000 UG/L	57.3	52.5	55.9	52.7	49.3	49.4
Chloride	500 MG/L	30.4	35.8	39.6	38.3	40.9	48.6
Copper[a]	15-22 UG/L	6.7	5.0	7.5	9.3	10.0	10.0
Dissolved Oxygen[f]	5.0 MG/L	9.8	10.2	10.2	10.9	11.5	12.2
Iron[a]	1000 UG/L	68	103.3	56.3	51.6	62.5	50.0
Lead[a]	31-52 UG/L	5.0	5.0	5.0	5.0	5.0	5.0
Manganese[a]	1000 UG/L	22.0	26.9	15.4	20.0	15.4	16.4
Mercury[a]	1.3 UG/L	0.05	0.05	0.11	0.06	0.08	0.1
Nickel[a]	1000 UG/L	16.7	15.0	20.6	23.6	25.0	25.0
Silver[a]	5.0 UG/L	3.3	3.0	3.0	3.0	3.0	3.0
Sulfate[a]	500 MG/L	32.1	35.1	34.8	33.6	36.5	33.8
Zinc[a]	1000 UG/L	77.8	100.0	100.0	100.0	100.0	100.0

[a] In some cases the actual value for samples taken during the year is known to be less than the average value shown. Standards for copper and lead, are based on hardness values of the Rock River (140-210 Mg/L).
[b] Average based on 9 samples
[c] Average based on 8 samples
[d] Average based on 7 samples
[e] Average based on 5 samples
[f] Minimum

Source: Illinois Environmental Protection Agency and Stanley Consultants

In this section the river is between 230 meters (755 ft) and 260 meters (853 ft) in width. Depths gradually increase from 0.3 meters (1 ft) along both banks to 2.5 meters (8 ft) in mid-channel. Substrate in most of the project area is sand mixed with fine gravel; however, an area measuring 250 meters (820 ft) by 50 meters (164 ft) along the south bank and immediately downstream of the mouth of Case Creek is composed of large gravel and cobble. Both shorelines are thinly wooded.

A total of 18 species of fish were collected from the project area (Taylor et al. 1995) utilizing a seine. The most abundant fish species consisted of gizzard shad (*Dorosoma cepedianum*), spotfin shiner (*Cyprinella spiloptera*), bullhead minnow (*Pimephales vigilax*) and slenderhead darter (*Percina phoxocephala*).

The IDNR has sampled for fish just west of the U.S. Route 67 bridge (approximately 2.9 kilometers (1.8 miles) downstream of the project area) using the electroshocking methodology during September 1997. The results of this survey indicated the presence of 25 species of fish. Of the 216 individuals sampled, the most abundant species were the emerald shiner (*Notropis atherinoides*) and freshwater drum (*Aplodinotus grunniens*) which represent 30 percent and 23 percent of the catch, respectively. Other common species were the carp (*Cyprinus carpio*), white bass (*Morone chrysops*) and river carpsucker (*Carpiodes carpio*) which represented 12 percent, 9 percent and 7 percent of the catch, respectively. The blue sucker (*Cycleptus elongatus*), a fish species on the federal candidate list, occurs within this area.

The freshwater mussel fauna of the project area is very poor. Two mussel surveys have been done in the project area using the brail methodology. The first survey yielded 21 live individuals of five species (Stanley Consultants 1986). The second survey yielded 12 individuals of five species (Taylor et al 1995). The most abundant mussel species collected during the 1995 survey was *Quadrula pustulosa*, accounting for over half of all the live mussels collected. All other species were represented by one or two individuals.

An extensive mussel bed occurs on the downstream side of the Steel Dam approximately 800 meters (0.5 mile) downstream of the project area. A total of 1141 live individuals representing 21 species (Havlik 1988) were identified. The dominant species consisted of *Amblema plicata* (236 individuals), *Obliquaria reflexa* (155 individuals), *Quadrula pustulosa* (155 individuals), *Leptodea fragilis* (140 individuals), *Quadrula quadrula* (98 individuals) and *Truncilla truncata* (94 individuals).

There is a commercial and recreational use of this section of the Rock River. The stretch of the river from its mouth to the I-80 bridge 28 kilometers (17.3 river miles) is assigned for commercial fishing by the IDNR. Fishing is done by net. The reported annual commercial fish harvest for 1998 totaled 30,107 pounds for this section of the river. The fish species include carp (16,940 lbs.), buffalo (12,400 lbs.), gar (45 lbs.) and drum (722 lbs.).

The river is used for fishing on a recreational basis as well, including the project area. Major fish species include large and small mouth bass, bluegill, sunfish, crappie, channel catfish, bullheads, carp, drum and walleye. The Steel Dam is a popular fishing area. Besides fishing, the project area is used for canoeing, boating and water-skiing.

2.8.1.2 Borrow Area. There is a borrow pond between the Rock River and I-280. This area was originally mined for gravel, and when abandoned, municipal waste and miscellaneous rubble were placed in parts of the pit (see Section 2.11). The disposal activities ceased in October 1969 with no formal closure activities (e.g., capping). Soil borings taken by Illinois DOT in 1977 found 5-8 ft of "soft decayed garbage" in the

substrate of this borrow area. The borrow pit later became filled with water. The depth of the water within the project area ranges between 1.4 and 3.2 meters (4.5 and 10.5 ft). The borrow pond encompasses approximately 10.04 hectares (24.8 acres) within the project study area. The entire borrow pond is about 32.4 hectares (80 acres) in size. This pond retains flood storage waters because it is within the regulatory floodplain of the Rock River. Several species of water fowl and wading birds have been observed using the pond.

Water quality samples of the borrow pond were collected in 1971 and 1972 by the Illinois Environmental Protection Agency (IEPA). IEPA concluded that the pond water could be directly discharged into the Rock River. No known water quality samples have been collected at the pond since 1972.

One composite sediment sample of the pond bottom was collected in 1987. No volatile or semi-volatile organic compounds were detected. The following metals were detected in the sediment sample: arsenic, chromium, copper, lead, mercury, nickel, and zinc (see Section 2.11). The state does not currently have sediment quality criteria, however, the state has established generic, pre-determined, soil remediation objectives (35 IAC 742). All metals except mercury were within natural background concentrations as identified by the IEPA. Mercury was slightly above natural background levels but well below the generic (Tier 1) remediation objectives. The thickness of the sediment overlying the refuse was not quantified, but since there were no formal closure activities (e.g., capping of the refuse), the sediment is likely to have naturally deposited over the refuse and is likely to be thin.

The borrow pond is classified as Limnetic Lacustrine (LIUBHx) on the NWI map. ~~This area was described by the Illinois Natural History Survey as "Waters of the United States" and is regulated as a lake (deep water habitat) and not as a wetland.~~ There was no vegetation in the pond. The Soil Survey of Rock Island County shows this area as "water."

2.8.1.3 Drainageway. A small intermittent drainage ditch flows through the project area from the north and discharges into the Rock River approximately 183 meters (600 ft) upstream of the proposed crossing. This drainageway drains an area of approximately 325 hectares (800 acres) containing a small portion of the bluff north of Blackhawk Road and the agricultural and commercial area between Blackhawk Road and the river. The drainageway passes through an existing culvert beneath Blackhawk Road. No data is available on the water quality of this drainage ditch.

North of Illinois Route 5 (Blackhawk Road) the NWI map (Figure 2-6) depicts this drainage area as a riverine intermittent streambed, semi-permanently flooded (R4SBF) wetland. South of the road the drainage area is classified as a palustrine forested wetland (PFO1a). The channel is considered to be an intermittent stream. Areas adjacent to the channel include wetland and non-wetlands.

2.8.2 Groundwater Resources

Groundwater near the project area is used for domestic (potable) and industrial/commercial purposes. According to the Illinois State Water Survey (ISWS) and Illinois State Geological Survey (ISGS) groundwater well databases, there are at least 23 water wells near the project area. Three serve industrial/commercial users and the rest are used for domestic purposes. Most of these wells are located in Section 19, Township 17 North, Range 1 West and all produce from limestone/dolomite bedrock at depths ranging from 4.6 to 91 meters (15 to 300 ft) below the surface. The ISWS does not have any records of municipal or large industrial/commercial wells within 914 meters (3,000 ft) of the project area. Milan, Rock Island, and Moline obtain their drinking water from the Mississippi River.

The closest water wells to the project area include an industrial/commercial well at United Parcel Service and individual wells for homeowners along Sunshine Lane, 91 meters (300 ft) west of proposed project. Residences and commercial establishments within the village limits of Milan obtain their drinking water from the village. The residences along Sunshine Lane are located in unincorporated Rock Island County and consequently are responsible to obtain their own potable water (i.e., individual private wells).

There are no sole-source aquifers, as defined by the Safe Drinking Water Act, in Illinois.

There are no available records indicating groundwater quality for the water supply wells near the project area. Historic data for former village of Milan municipal wells and wells serving subdivisions south and east of the project indicate that the groundwater quality is good.

Potential sources of groundwater contamination include leaking underground storage tanks and an inactive landfill (part of borrow pond area). These sources are discussed in Section 2.11.

2.8.3 Floodplains

The Rock River floodplain in the project corridor consists of woodlands, cropland, and an old borrow area (see Figure 2-8). An earthen levee occurs on the south side of the river and lies between the river and I-280. The levee protects this area from the 100-year flood. The north side of the river is not leveed. Figure 2-8 also shows the regulated Rock River floodway.

The Rock River floods the project area on a periodic basis. Most floods are in the early spring and flooding is more pronounced on the north side of the river (no levee present). Floodwater elevations are: 50-year flood 173.85 meters (570 ft), 100-year flood 174.12 meters (571 ft), and 500-year flood 174.46 meters (572 ft).

The 27th Street and I-74 bridges, approximately 3.1 kilometers (1.9 miles) upstream from the proposed bridge crossing, are a source of periodic flooding. During some springs, ice in the river will pile up against the bridge piers of one or both bridges acting as a dam. Water rises for several miles upstream and has caused damage to homes on either side of the river as there are no levees to protect adjacent property.

2.8.4 Wetlands

For the purposes of complying with the Section 404 program the federal government endorses the use of two separate wetlands delineation manuals, the 1987 Corps of Engineers Wetlands Delineation Manual and the National Food Securities Manual-Third Edition. A 1994 Federal Memorandum of Agreement between the Department of Defense, Department of Interior, Environmental Protection Agency, and Department of Agriculture defines situations to which these two manuals may be applied. It requires the use of the 1987 Corps of Engineers Wetlands Delineation Manual (with current national Corps of Engineer guidance) by all federal resource agencies on non-agricultural land for Section 404 purposes. When determinations and/or delineations are made on agricultural lands for Section 404 purposes the National Food Security Act Manual - Third Edition is required. Wetland sites designated with a 'F' comply with the food securities manual; those designated with a 'W' comply with the Corps of Engineers delineation manual.

Flood Hazard Areas, Figure 2-8

Flood Hazard Areas
Figure 2-8

The National Wetlands Inventory (NWI) Map (Milan Quadrangle) depicts several wetlands within the project limits (Figure 2-6). Several wetland delineations have been conducted for this project study corridor. The most recent were carried out by representatives of the Illinois Natural History Survey (INHS) on May 21 and May 22, 1997 (a copy of this report can be obtained from the IDOT District 2 office in Dixon). The final determinations were made by Natural Resource Conservation Service (NRCS) personnel as stated in letters dated September 23, 1997 (see Appendix D), and February 9, 1998 (see Appendix D) and the U.S. Army Corps of Engineers in a memo dated May 22, 1998 (see Appendix D). Several sites (Figure 2-9) were determined to be under the U.S. Army Corps of Engineers' jurisdiction and Natural Resource Conservation Service regulation.

The characteristics of each individual wetland site is described in Table 2-5. These wetlands are located in the Rock River floodplain. The wetlands in the project area were assessed for floristic quality, wildlife habitat, and floodwater storage capabilities. The material for the assessment is based on the wetland delineations (Keene, Admiraal and Harper 1997). Two methods are available to evaluate the floristic quality of the wetlands in the project area; the Floristic Quality Index (FQI) and the occurrence of non-native plant species (Percent Adventive). The FQI provides a measure of floristic integrity or level of disturbance of a site. Each plant species native to Illinois is assigned a rating between 0 and 10 that is a subjective indicator of how likely it is that a plant may be found on an undisturbed site in a natural plant community. An index score below 10 suggests a site of low natural quality; below 5, a highly disturbed site. An FQI of 20 or more suggests that a site has evidence of native character and may be considered an environmental asset. Of the nine vegetated wetlands within the project corridor, one has an FQI below 5 (W-2), two below 10 (W-1, W-10) and the remaining six are between 10 and 20. The FQI of Farmed Wetlands is zero.

The Percent Adventive is also used as a measure of site disturbance. The measure is obtained by dividing the total number of plant species into the number of non-native plant species that occur at a particular site. The higher the percentage the more non-native species that occur within the site and therefore, the more disturbed the site is. Some of these non-native species include white mulberry (*Morus alba*), garlic mustard (*Alliaria petiolata*), reed canary grass (*Phalaris arundinacea*), common buckthorn (*Rhamnus cathartica*) and meadow grass (*Poa trivalis*). Of the nine vegetated sites within the project corridor, the sites with the fewest exotic plants species are W-10 and W-1 (less than 9 percent) and the sites with the most exotic species are W-2 (33 percent), W-3 (24 percent) and W-4 (23 percent). The remaining sites occur between these limits.

The wildlife habitat assessment is based on observations of general habitat conditions in the project corridor. In addition, an avian survey (Amundsen and Enstrom 1996) was performed in some wetland areas. During a four season survey (Winter, Spring, Breeding and Fall) within the palustrine forested wetland areas the Black-capped Chickadee (*Parus atricapillus*) was the most common during all four seasons. Other common species included the Downy Woodpecker (*Picoides pubescens*) , Northern Cardinal (*Cardinalis cardinalis*), American Robin (*Turdus migratorius*), European Starling (Sturnus vulgaris), Brown-headed Cowbird (*Molothrus ater*) and House Wren (*Troglodytes aedon*).

Table 2-5 Wetland Characteristics

Wetland Number	NWI Class.	Plant Community	Dominant Vegetation	Soil Type	Wetland Size Hectares (Acres)	Floristic Quality Index (FQI)	Percent Adventive	Functional Value
W-1	Not Coded	Floodplain Forest	Silver Maple, Box Elder, Virginia Wild Rye, Reed Canary Grass	Millington Soil Loam	2.82 (6.98)	9.5	9	Water Storage; Average Wildlife Habitat
W-2	PEMAh	Wet Meadow	Reed Canary Grass	Marsh	0.39 (0.97)	1.4	33	Floodwater Storage; Fair to Poor Wildlife Habitat
W-3	PFO1Ah	Floodplain Forest	Silver Maple, American Elm, Ontario Aster, Panicled Aster, Reed Canary Grass	Other Silt Loam	17.09 (42.24)	11.7	24	Floodwater Storage; Good Wildlife Habitat
W-4	PEMA/ PSS1A	Wet Shrubland/Wet Meadow	Eastern Cottonwood, Black Willow, Green Ash, Sandbar Willow, Reed Canary Grass	Other Silt Loam	11.97 (29.57)	12.4	23	Water Storage; Water Purification Zone; Fair Wildlife Habitat
W-5	PEMA/ PSS1A	Floodplain Forest	Eastern Cottonwood, Box Elder, American Elm, Common Horsetail, Jewelweed, Late Goldenrod	Other Silt Loam	1.86 (4.59)	12.7	19	Water Storage; Water Purification Zone; Average Wildlife Habitat
W-8	PFO1A	Floodplain Forest	Box Elder, Eastern Cottonwood, Sandbar Willow, Annual Bedstraw, Canada Wood Nettle, Anise-root, Reed Canary Grass, Common Snakeroot	Sawmill Silty Clay Loam	2.14 (5.28)	16.8	14	Water Storage; Water Purification Zone; Average Wildlife Habitat
W-9	PFO1A	Floodplain Forest	Box Elder, Green Ash, Rough-leaved Dogwood, Garlic Mustard, Annual Bedstraw, Canada Wood Nettle, Moneywort	Otter Silt Loam	4.18 (10.33)	13.7	16	Water Storage; Water Purification Zone; Good Wildlife Habitat
W-10	PUBGx	Pond	Eastern Cottonwood, Rough-leaved Dogwood, Common Duckweed	Undetermined (Excavated)	0.14 (0.34)	8.3	7	Waterfowl and Aquatic Habitat
W-11	PFO1A	Floodplain Forest	Green Ash, Rough-leaved Dogwood, White Grass, Moneywort, Reed Canary Grass	Otter Silt Loam	0.84 (2.07)	19.2	10	Water Storage; Good Wildlife Habitat
F-3	Not Coded	Forested Wetland (NRCS*)	Silver Maple, Cottonwood, Box Elder, Canada Wood Nettle, Reed Canary Grass	Otter Silt Loam	0.49 (1.21)	Not Available	Not Available	Water Storage; Water Purification Zone; Average Wildlife Habitat

Table 2-5 Wetland Characteristics (Continued)

Wetland Number	NWI Class.	Plant Community	Dominant Vegetation	Soil Type	Wetland Size Hectares (Acres)	Floristic Quality Index (FQI)	Percent Adventive	Functional Value
F-8	Not Coded	Forested Wetland (NRCS*)	Silver Maple, Cottonwood, Box Elder, Canada Wood Nettle, Reed Canary Grass	Wabash Silty Clay	0.14 (0.36)	Not Available	Not Available	Water Storage; Water Purification Zone; Average Wildlife Habitat
F-10	Not Coded	Forested Wetland (NRCS*)	Silver Maple, Cottonwood, Box Elder, Canada Wood Nettle, Reed Canary Grass	Wabash Silty Clay	1.29 (3.20)	Not Available	Not Available	Water Storage; Water Purification Zone; Average Wildlife Habitat
F-12	Not Coded	Forested Wetland (NRCS*)	Silver Maple, Cottonwood, Box Elder, Canada Wood Nettle, Reed Canary Grass	Wabash Silty Clay	1.81 (4.48)	Not Available	Not Available	Water Storage; Water Purification Zone; Average Wildlife Habitat
F-16	Not Coded	Forested Wetland (NRCS*)	Silver Maple, Cottonwood, Box Elder, Canada Wood Nettle, Reed Canary Grass	Otter Silt Loam	7.61 (18.81)	Not Available	Not Available	Water Storage; Water Purification Zone; Average Wildlife Habitat
F-1, F-2, F-4, F-5, F-7, F-9, F-13, F-14, F-17	Not Coded	Farmed Wetland (NRCS*)	Corn, Soybeans	Coffeen Silt Loam, Orion Silt Loam, Otter Silt Loam, Sawmill Silt Loam, Wabash Silty Clay	16.88 41.71)	0	100	Water Storage; Poor Wildlife Habitat

* These designations were received from USDA Natural Resources Conservation Service (NRCS).

Source: Illinois Department of Transportation

Floodwater storage of wetlands was assessed based on field observations. Floodwater storage in the project area is considered to be of good quality within the project corridor because the sites occur on the Rock River floodplain. The wetlands do not hold water for an extended period of time.

Five types of wetlands occur in the proposed project corridor. The wetland types are Floodplain Forest, Wet Meadow, Wet Shrubland/Meadow, Pond, and Farmed Wetland. These wetlands will be described according to this classification.

The Floodplain Forests are classified as forested palustrine wetlands. These are secondary growth forests. The Floodplain Forests encompass more than 40.28 hectares (99.55 acres) within the vicinity of the project.

The Wet Meadow is classified as a palustrine emergent wetland and is characterized by erect, rooted herbaceous plants. The Wet Meadow encompasses approximately 0.39 hectare (0.97 acre) within the project study area.

The Wet Shrubland and Wet Meadow site is classified as a palustrine emergent wetland and a scrub-shrub palustrine wetland. It is characterized by having both erect, rooted herbaceous plants and woody vegetation less than 6 meters (20 ft) tall. The Wet Shrubland and Wet Meadow encompass approximately 11.97 hectares (29.57 acres) within the project study area.

The Pond is classified as an excavated, intermittently exposed, unconsolidated bottom palustrine wetland. The Pond encompasses about 0.14 hectare (0.34 acre) within the project study area.

Farmed Wetlands were determined to be wetlands based on the presence of hydric soils and wetland hydrology. The Farmed Wetlands encompass approximately 16.88 hectares (41.71 acres) within the project study area.

2.9 Ecological Resources

2.9.1 Vegetation/Habitat

A detailed vegetation survey was conducted for the project area. The cover types present in the project area are shown in Table 2-6 and on Figure 2-9. This data can be obtained upon request from the Illinois Department of Transportation, District 2 Office, Dixon, Illinois.

The major cover types in the project corridor are upland cropland and commercial/urban with about 32.4 and 31.3 percent cover, respectively. Cropland consists of fields in cultivation with corn (*Zea mays*) and soybeans (*Glycine max*). Although these cropland areas are upland, other cropland areas are previously converted wetlands or farmed wetlands and cover about 6.9 percent of the study corridor. The commercial/urban consists of buildings with landscape trees, shrubs, and lawns. Some of these areas contain a small grassland type habitat.

Floodplain forests also encompass a large portion of the project study corridor (about 16.5 percent). These forests are located along the Rock River, a small stream north of the river,

and around the old borrow site. There is also a floodplain forest on the island located in the study corridor. (This island is called William Carr Island on the city maps.) Dominant tree species include cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), box elder (A. negundo), black willow (*Salix nigra*), sandbar willow (*S. exigua*), green ash (*Fraxinus pennsylvanica*), and American elm (*Ulmus americana*). Other species include reed canary grass (*Phalaris arundinacea*), wood nettle (*Laportea canadensis*), and other spring ephemerals.

Most of the palustrine emergent wetlands (wet meadow) and scrub-shrub palustrine wetlands (wet shrubland/meadow) are located north of the Rock River and its adjoining floodplain forest. There is also a palustrine emergent wetland on the island. These areas are dominated by reed canary grass, silver maple, sandbar willow, and black willow saplings. The wet meadow covers 0.16 percent and the wet shrubland covers 4.9 percent of the project area.

Some of the drainage ditches have wooded areas along them. These were classified as upland woodland and encompass 3.6 percent of the study corridor. Dominant tree species in these areas include cottonwood, box elder, wild black cherry (*Prunus serotina*), and black locust (*Robinia pseudoacacia*). Most of these trees were small, indicating that the sites had been previously disturbed and these trees were secondary growth.

There is a row of trees along the fenceline west of the existing alignment south of Airport Road. Tree species in this segment include mulberry (*Morus rubra*), hackberry (*Celtis occidentalis*), American elm, butternut (*Juglans cinerea*), box elder, silver maple, and red pine (*Pinus resinosa*). The rest of the existing right-of-way is dominated by domestic grasses, including smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*).

Table 2-6 Cover Types in the Study Corridor

Cover Type	Site # On Aerial	Dominant Vegetation	Type of Disturbance	Total Hectares (Acres) in Study Corridor*	Percent Occurrence in Study Corridor
Cropland Upland	U-1	Corn, Soybeans	Plowed and Vegetation Removal	79.04 (195.31)	32.41
Commercial/ Urban and Mowed Lawns/Grass	U-3	Kentucky Bluegrass, Landscape Trees and Shrubs	Native Vegetation Removed	76.34 (188.64)	31.31
Floodplain Forest	W-1, W-3, W-5, W-8, W-9, W-11, F-3, F-8, F-10, F-12, F-16	Cottonwood, Silver Maple, Box Elder, Black Willow, Wood Nettle, Reed Canary Grass	Fragmented, Secondary Growth, Some Vegetation Removed	40.28 (99.55)	16.52
Farmed Wetland	F-1, F-2, F-4, F-5, F-7, F-9, F-13, F-14, F-17	Corn, Soybeans	Plowed and Vegetation Removal	16.88 (41.71)	6.92
Upland Woodland/ Trees	U-2, U-6, U-7	Mulberry, Hackberry, American Elm, Sugar Maple, Silver Maple, Box Elder, Black Locust, Wild Black Cherry, Wood Nettle	Some Fence Row Vegetation, Fragmented	8.76 (21.64)	3.59
Wet Shrubland/ Wet Meadow	W-4	Silver Maple, Black Willow, Sandbar Willow, Reed Canary Grass	Original Vegetation Removed	11.94 (29.57)	4.91
Borrow Pond	L-1	No Vegetation in Lake	Excavated and Used as Dump	10.04 (24.80)	4.12
Wet Meadow	W-2	Reed Canary Grass	Native Vegetation Removed	0.39 (0.97)	0.16

Table 2-6 Cover Types in the Study Corridor (Continued)

Cover Type	Site # On Aerial	Dominant Vegetation	Type of Disturbance	Total Hectares (Acres) in Study Corridor*	Percent Occurrence in Study Corridor
Pond	W-10	Cottonwood, Rough-leafed Dogwood, Common Duckweed	Excavated	0.14 (0.34)	0.06
Totals				243.84 (602.53)	100.00

* Note: The Study Corridor was considered to be approximately 2,000 ft on either side of the proposed centerline.

Source: Illinois Department of Transportation

Cover Types, Figure 2-9

Cover Types
Figure 2-9

2.9.2 Wildlife

Most wildlife populations are restricted to the areas near the Rock River, the stream, and the borrow pond. These areas provide a source of water, food, and cover for these animals, as well as protection from humans. Although some of this project area has been farmed, most of the land near the river has not been developed and it serves as an "oasis" for wildlife in an area which is gradually being urbanized and enclosed by the Quad City Metropolitan area. There are "breaks" in this habitat caused by urban development, roads, agricultural practices, and even a parking lot for Ben Williamson Park. This fragmentation of the habitat influences the types of species living in the project area. Some species, such as the prothonotary warbler (*Protonotaria citrea*) and the pileated woodpecker (*Oryocopus pileatus*) require large expanses of uninterrupted habitat for nesting. An indicator of fragmentation of the forest community is the presence of the brown-headed cowbird (*Molothrus ater*) during the breeding season. This bird, a nest parasite of other birds, is especially likely to prevent successful reproduction by long distance migrants which winter in the New World tropics (*neo-tropical migrants*). It is also more likely to parasitize nests near a forest edge than those in the forest interior. A letter from Peter Peterson, Ornithologist, dated March 5, 1986, (see Appendix D) stated that the bottomland forest near the proposed project was a breeding area for the prothonotary warbler and the pileated woodpecker. Neither of these bird species were observed in the 1988 or the 1995 survey. The cowbird was not observed in 1988, but was observed during the 1995 spring and breeding season surveys. The disappearance of two species and the appearance of a different species with different habitat preferences is an indication that fragmentation of this bottomland forest has already occurred to the extent which affects the make-up of the avian population. This is also an indication that fragmentation has already affected the other fauna and the flora living in the area.

Suitable habitat exists in these areas for several species of mammals, including the white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), beaver (*Castor canadensis*), raccoon (*Procyon lotor*), eastern fox squirrel (*Sciurus niger*), red fox (*Vulpes fulva*), muskrat (*Ondatra zibethica*), and mink (*Mustela vison*). Most of these species were observed during various surveys by either sight or sign. Hunting is not common because of the urban location.

An avifauna survey was conducted in the project area by ornithologists from the Illinois Natural History Survey (INHS) on May 16, 1988 and again between February 16, 1995 through October 20, 1995. During the 1995 census, 646 individuals representing 30 families and 63 species were recorded within or near the corridor boundaries. A total of 143 individuals representing 17 families and 31 species was recorded during the breeding season census. The most common bird species surveyed in the area included black-capped chickadee (*Parus atricapillus*), northern cardinal (*Cardinalis cardinalis*), European starling (*Sturnus vulgaris*), American robin (*Turdus migratorius*), red-winged blackbird (*Agelaius phoeniceus*), brown-headed cowbird (*Molothrus ater*), house wren (*Troglodytes aedon*), song sparrow (*Melospiza melodia*), white-throated sparrow (*Zonotrichia albicollis*), downy woodpecker (*Picoides pubescens*). There is suitable nesting habitat for several of these species within the project corridor.

Fish and mussel surveys were conducted in the project area, with the most recent carried out by INHS on September 5, 1995. A variety of fish species are found in the Rock River ranging from carp (*Cyprinus carpio*), to channel catfish (*Ictalurus punctatus*), to walleye (*Stizostedion vitreum*). Only 12 live mussels representing five species were collected in the project corridor and are listed in the mussel survey report. The most abundant living mussel species collected was the pimpleback mussel (*Quadrula pustulosa*). No mussel beds were found to be present in the project area.

2.9.3 Endangered and Threatened Species

2.9.3.1 Federally-listed Species.

2.9.3.1.1 Federally-listed Animal Species - The U.S. Fish and Wildlife Service publication of the Great Lakes Red Book for Threatened and Endangered Species lists the federally-endangered Indiana bat (Myotis sodalis), Higgins' eye pearly mussel (Lampsilis higginsi), and fat pocketbook mussel (Potamilus capax) as occurring in Rock Island County. The federally-threatened animal species listed for the County is the bald eagle (Haliaeetus leucocephalus).

According to the Illinois Natural History Survey Bat Specialist, the closest areas to the proposed project that the Indiana Bat has been found to be present are in LaSalle and Jo Daviess Counties. The Illinois Department of Natural Resources (IDNR) publication, Endangered and Threatened Species in Illinois, does not contain a record of occurrence for Rock Island County, which may be due to the assumption that the county is too far north for the species to occur. The floodplain forests in the project corridor do not contain suitable habitat for the Indiana bat. Therefore, the proposed project will not jeopardize this species existence.

The Rock River and Rock Island County are potential habitat for several species of mussel, including the Higgins' eye pearly mussel, the fat pocketbook mussel, and several Illinois-listed species. The Illinois Department of Natural Resources (IDNR) Natural Heritage Database (Appendix D, pages D-4576, D-4677, and D-6090) has records from within the project corridor for the Higgins' eye pearly mussel. Therefore, a mussel survey was conducted by representatives from Stanley Consultants, Inc. and IDOT in 1986. Another mussel survey was conducted by INHS on September 5, 1995. No Federal- or State-endangered or threatened mussel species were found. No mussel beds or suitable habitat was found in the project corridor. However, a good mussel population (over 1,000 individuals of 21 species) exists downstream of the Steel Dam at Milan (0.9 Km downstream from the proposed bridge).

The Bald Eagle is listed as wintering in Rock Island County. Appendix D (pages D-~~18~~30 and D-~~19~~38) contains February 10, 1986 and March 5, 1986 letters from the late Mr. Elton Fawks, an eagle expert from the Quad City Area, and the late Mr. Peter Peterson from the Iowa Ornithologists' Union. They both stated that the bald eagle is not known to roost in this area and will not be impacted by this proposed project. The bald eagle was observed on March 7, 1995 during the INHS avian

survey near the study corridor but outside the timed census periods. Their report stated that this a fairly common migrant and winter resident along the large rivers in Illinois. They concluded that this sighting was not indicative of the presence of important habitat within the project corridor. Therefore, the proposed project will not jeopardize this species existence.

2.9.3.1.2 Federally-listed Plant Species - The only federally-threatened plant species listed for the county is the prairie white fringed orchid (Platanthera leucophacea). Although the prairie white fringed orchid is listed for Rock Island County, records show that it may no longer be extant in this county. This species was not found in the project area and there is no suitable habitat for this species.

2.9.3.2 State-listed Species.

2.9.3.2.1 State-listed Animal Species - The Illinois Endangered Species Protection Board (1999) also lists several Illinois endangered and threatened species as occurring in this county. Those that could be potentially impacted are described below.

The river otter (*Lontra canadensis*) is the only state-endangered mammal species listed for the county. The only state-threatened species listed is the bobcat (*Lynx rufus*). Of these two species, the IDNR Database (see Appendix D) had records of only the river otter and it was from within three miles of the project corridor. Therefore, the INHS conducted a river otter survey on March 7, 1995, in the project corridor. Their report stated that the portion of the river within the study corridor appears to provide at least marginally suitable river otter habitat. However, they found no evidence of river otter within the project corridor during their survey. Therefore, the river otter is not expected to be affected by this project.

The black-crowned night heron (*Nycticorax nycticorax*), the yellow-crowned night heron (*Nyctanassa violacea*), Bewick's wren (*Thryomanes bewickii*) are listed as state-endangered species in Rock Island County. The least bittern (*Ixobrychus exilis*), loggerhead shrike (*Lanius ludovicianus*), and the bald eagle are listed as state-threatened species in the county. Two veeries (*Catharus fuscescens*), which have recently been removed from state-threatened bird species list, were observed during the 1988 survey conducted by INHS. These birds exhibited territorial behavior and may have been breeding in the area. They were not sighted during the 1995 INHS bird census of the area. Great egrets (*Casmerodius albus*), also recently removed from the list were sighted fishing along the edge of the old borrow pond on three occasions.

In 1995, the INHS conducted a bird census during the winter, spring, summer (breeding period), and fall. One Illinois threatened species, the brown creeper (*Certhia americana*), was observed during their timed censuses. This sighting was during the spring migration period and was not indicative of the presence of important brown creeper habitat. They also observed three Illinois-threatened species (pied-billed grebe, brown creeper, and bald eagle) within or near the corridor

outside the timed census periods. They concluded that these sightings were not indicative of the presence of important habitat for these species.

There are one state-endangered and three state-threatened species of reptiles and amphibians listed for Rock Island County. These are the alligator snapping turtle (*Macroclemys temmincki*), which is Illinois-endangered; western hognose snake (*Heterodon nasicus*), timber rattlesnake (*Crotalus horridus*), and the four-toed salamander (*Hemidactylium scutatum*), which are Illinois-threatened. None of these species were found in the project area, and there is no suitable habitat for any of these species.

The state-endangered pallid shiner (*Hybopsis amnis*), lake sturgeon (*Acipenser fulvescens*), Iowa darter (*Etheostoma exile*), western sand darter (*Ammocrypta clara*), and blacknose shiner (*Notropis heterolepis*) are listed for Rock Island County. No state or federal endangered or threatened fish species was collected during the INHS 1995 fish survey of the project corridor. Their conclusion was that only the lake sturgeon could potentially be in the project area based on past records. They stated that lake sturgeon are capable of migrating long distances and would probably move to other areas of the river during construction activities.

2.9.3.2.2 State-listed Plant Species - The Illinois Endangered Species Protection Board lists four endangered plant species which are Tennessee milk vetch (Astragalus tennesseensis), downy yellow painted cup (Castilleja sessiliflora), prairie white fringed orchid (Platanthera leucophaea), and running pine (Lycopodium clavatum). There are also two threatened species--kitten tails (Besseya bullii) and Hill's thistle (Cirsium hillii). None of these plant species were found in the project area, and there is no suitable habitat for any of these species.

2.9.4 Natural Areas and Nature Preserves

The Hennepin Canal Parkway State Park is approximately one-half mile west of the project. The closest natural area is the Rock River-Carr Island Illinois Natural Area Inventory Site, which is approximately one-half mile downstream from the proposed river crossing beginning at the Steel Dam (Lock and Dam #30) and extending to the river's mouth. The nature preserve located in Black Hawk State Park is about 1.5 miles west of the proposed project. These parklands will not be impacted by the proposed project. Therefore, no nature preserves, natural areas, parks, or wildlife and waterfowl refuges will be impacted by this proposed project.

Augustana College, which is a private college, owns part of the proposed right-of-way for this project. This area consists of floodplain forest and portions of agricultural fields located north of the Rock River. This area is used as a biological field station for students. The agricultural holdings are proposed as mitigation sites.

2.10 Visual Resources

The project area exhibits diverse and contrasting visual resources. Resources include attractive wooded bluffs, the Rock River, a flooded borrow area, wetlands, prime and marginal farmland, forested floodplain, commercial development, residential settings and waste areas.

Most of the views within the project area are typical of developing suburban or semi-rural Illinois with neither attractive nor unappealing viewscapes. The view looking south toward the bluffs from the existing Milan Beltway is probably the most attractive view in the project area while the view of several of the commercial facilities along Airport Road is probably the least appealing. The bluff on the north side of the river is not easily viewed from anywhere within the project area. There is no good location for viewing the valley from the residential area atop the bluff above the Blackhawk Road.

Much of the project area is not visible to motorists. There is no vehicle access between I-280 on the south side of the river and 52nd Avenue on the north side. Motorists have no view of the Rock River or any of the adjacent bottomland forest or floodplain. The river can be seen from the water skiing practice site in Ben Williamson Park. Glimpses of the borrow area and the forested bottomland are available from the westbound lane of I-280 but the view is fleeting and not particularly attractive. A bike trail circles the borrow area but does not penetrate the forested floodplain or extend to the river. The transmission line through Ben Williamson Park cannot easily be seen and is not visibly offensive.

2.11 Special Waste

The U.S. Environmental Protection Agency (USEPA) listing of potential, suspected, and known hazardous waste or hazardous substance sites in Illinois (i.e., the Comprehensive Environmental Response, Compensation and Liability Information System [CERCLIS] list) has been reviewed to ascertain whether the proposed project will involve any listed sites. As a result of this review, it has been determined that the proposed undertaking will not require any right-of-way or any easement from a site included in the CERCLIS listing as of February 4, 2003.

A Preliminary Environmental Site Assessment (PESA) for sites potentially impacted with regulated substances was conducted by the Illinois State Geological Survey in 1993. The PESA concluded that the build alternative will involve special waste sites. Sites contaminated with hazardous substances may be involved.

The PESA identified six sites that may contain regulated substances that potentially could impact the proposed project. Petroleum-like compounds were detected in soil or shallow groundwater screening samples at Auto Acres, United Parcel Service, Kerr-McGee (now Mobile) gas station, and the borrow pond (landfill). Unidentified volatile organic compounds were detected in the screening samples at Thermo King, Adrian Carriers, and the borrow pond. These six sites are described below and shown on Figure 2-10. In addition, the PESA reported that buildings scheduled to be demolished may have asbestos-containing materials, however, sampling for asbestos was not conducted. The PESA recommended further investigations be conducted to determine the risks and liabilities of involvement with potential hazardous substances.

Auto Acres is a scrap metal yard located at 1709 East 1st Avenue. It stores fuels in aboveground tanks and may have historically stored waste oil. The Preliminary Site Investigation (PSI) conducted in 1994 within the proposed right-of-way acquisition area did not identify any compounds that exceeded the IEPA Tier 1 soil or groundwater remediation objectives. The Tier 1 soil and groundwater remediation objectives are generic, pre-determined levels to protect human health and the environment (35 IAC 742).

United Parcel Service is located at 1800 East 1st Avenue. It has historically stored and currently stores gasoline in an underground storage tank (UST). It is listed as a leaking UST site. During removal of its waste oil UST in 1990, contaminated soils were found in the UST pit. Further information regarding this LUST site was not available. The PSI did not identify any compounds that exceeded IEPA Tier 1 soil or groundwater remediation objectives within the proposed right-of-way acquisition area.

The Kerr-McGee gas station is located on the northwest corner of Milan Beltway and 1st Avenue. This entire parcel is proposed to be acquired for the project. It has at least three USTs. It reported a leak from one of its USTs in 1995. Information regarding this incident was not available for review. The PSI confirmed the presence of petroleum constituents in the soil and groundwater at the site. Several of these petroleum constituents exceeded IEPA's Tier 1 soil or groundwater remediation objectives at one or more sampling locations.

The borrow pond is located between the Rock River and I-280. It was originally mined for gravel in the 1950s, and when abandoned, municipal waste and miscellaneous rubble were placed in parts of the pit in the 1960s. The unpermitted disposal operation ceased in 1969.

Special Waste Sites, Figure 2-10

Special Waste Sites
Figure 2-10

Based on investigations conducted in 1977 and 1987, an estimated 16,820 cubic meters (22,000 cubic yards) of refuse lie within the proposed right-of-way. The refuse thickness ranges from 2.4 meters (8 ft) at the south end to none present at the north end. Also, in general, the west side has more refuse than the east side.

No formal capping of the refuse has occurred, however, sediment has naturally settled on top of the refuse. One composite sample of the sediment was collected in 1987. No organic compounds were detected. The inorganic compounds (i.e., metals) were below IEPA's Tier 1 soil remediation objectives.

Thermo King, located at 78th Avenue and Milan Beltway, has three diesel USTs. Thermo King is located just south of the planned roadway improvements and is not expected to adversely impact the project.

Adrian Carriers (aka LMI) is a trucking company located at 1917 East 1st Avenue, just north of the Kerr-McGee gas station. It has one UST. Soil samples collected in 1987 did not detect organic compounds above detection limits, however, several metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc) were detected. Cadmium, lead, mercury, nickel, silver, and zinc were detected above naturally-occurring levels as identified by IEPA, but the concentrations were less than any IEPA Tier 1 soil remediation objective. Oil was observed spread throughout the parking lot. A sample of the parking lot soil was tested for PCBs in 1993 but the results were all less than the detection limits.

2.12 Noise

Vehicle exhaust and tire noise are the main sources of traffic noise. Although most vehicles have equipment (mufflers) to control the exhaust noise, some vehicles, especially diesel trucks, emit quantifiable exhaust noise with the muffler. Tire noise is another significant contributor to noise levels, and varies depending upon the speed, the texture of the roadway surface, and the tread design.

In predicting traffic noise levels, equivalent steady state sound levels (L_{eq}) were calculated. This sound level has the same acoustic energy as a time-varying sound level during the same period. The FHWA noise abatement threshold values, as shown in Table 2-7, represent levels that should be considered as maximum values before abatement must be considered .

Table 2-7 FHWA Noise Abatement Threshold Values

Activity	(dBA) L_{eq}*
A. Tracts of land in which serenity and quiet are of significance and serve an important public need.	57
B. Picnic areas, recreation areas, playgrounds and parks not included in Category A. Residences, motels, schools, churches, libraries, and hospitals.	67
C. Developed lands, properties, or activities not included in Categories A and B. Commercial and industrial areas.	72
D. Interior areas of residences, motels, schools, churches, libraries, and hospitals.	52
* Equivalent steady state sound levels.	

Source: 23 Code of Federal Regulations, Part 112

2.12.1 Monitored Traffic Noise Levels

Traffic noise levels were monitored at two locations near the intersection of Airport Road and Milan Beltway and six locations along Blackhawk Road as shown on Figure 2-11. Traffic noise was monitored using the hand-held Brüel & Kjear Type 450B sound level meter (ANSI Type 3). The accuracy of this monitor is ± 1 dBA. A two-person team monitored each location's levels at five-second intervals. The monitor was calibrated each day before readings were taken. Traffic noise levels were monitored on two days: August 20 and October 15, 1986. All monitoring samples were collected on weekdays between 9:00 a.m. and 12:00 noon, which corresponds to peak traffic hours. Table 2-8 summarizes the monitoring results for each location.

As shown in Table 2-8, monitored noise levels ranged from 43 to 63 dBA. The highest levels were recorded at the Blackhawk Road residences (Location R8), and the residence adjacent to Airport Road (Location R2). Lowest levels were recorded in the elevated and sheltered residential area above Blackhawk Road (Location R7).

Noise Monitoring Locations, Figure 2-11

Noise Monitoring Locations
Figure 2-11

Table 2-8 Noise Monitoring Results
Milan Beltway Extension

Receptor	Location	Monitored Level (dBA)	Standard Deviation
R1	Sunshine Lane, Milan	43	1.99
R2	1912 Airport Road	54	4.07
R4	Medical Arts Ctr N	53	1.44
R5	Medical Arts Ctr S	44	2.35
R6	Former Velie's Restaurant	43	0.96
R7	42nd Ave., Rock Island	44	1.82
R8	Residence, Blackhawk Road	63	5.38

Source: Stanley Consultants

2.13 Air Quality

The National Ambient Air Quality Standards (NAAQS), established by the U.S. Environmental Protection Agency, set maximum allowable concentration limits for six criteria air pollutants. Areas in which air pollution levels persistently exceed the NAAQS may be designated as "non-attainment." States in which a non-attainment area is located must develop and implement a State Implementation Plan (SIP) containing policies and regulations that will bring about attainment of the NAAQS.

All areas of Illinois currently are in attainment of the standards for four of the six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. Chicago and Metro-East St. Louis are classified as non-attainment for the 1-hour ozone standard. In addition, Cook, DuPage, Kane, Lake, McHenry, and Will Counties and Aux Sable and Goose Lake Townships in Grundy County and Oswego Township in Kendall County have been classified as a severed ozone non-attainment area. Lake Calumet and McCook in Cook County have been designated as non-attainment for the particulate matter (PM_{10}) standard. The sources of particulate matter that prompted the non-attainment classification are unrelated to transportation. All other areas of Illinois currently are in attainment for the ozone and PM_{10} standards.

No portion of this project is located within a designated non-attainment area.

The Air Quality Index (AQI) is the current national standard method for reporting air pollution levels to the general public. The AQI is based on the short-term Federal National Ambient Air Quality Standards (NAAQS), the Federal episode criteria, and the Federal Significant Harm levels for five of the "criteria pollutants," namely, ground-level Ozone (O_3), Sulfur Dioxide (SO_2), Carbon Monoxide (CO), Particulate Matter (PM), and Nitrogen Dioxide (NO_2). The AQI levels have been divided into six categories: "Good" (0-50), "Moderate" (51-100), "Unhealthy for Sensitive Groups" (101-150), "Unhealthy" (151-200), "Very Unhealthy" (201-300), and "Hazardous" (301-500).

AQI classifications of “Unhealthy for Sensitive Groups” and “Unhealthy” are uncommon in Illinois. Classifications of “Very Unhealthy” are rare. To date, no classifications of “Hazardous” have occurred in Illinois.